

## **New Start Projects for the FY 2005 FCT Program**

### **Army Projects**

**3rd Generation Focal Plane Arrays (United Kingdom).** This project will evaluate high-performance low-cost 3rd Generation Focal Plane Arrays (FPAs) developed by Qinetiq that will support the Army's Future Combat System requirements. Qinetiq has developed an alternative substrate for 3rd Gen FPAs which reduces the cost of current and future FPAs by 75% and increases the reliability by 200% while meeting system requirements.

**Engine Air Particle Separator for CH-47 (United Kingdom).** This project will evaluate the UK Engine Air Particle Separators (EAPS) developed by Pall AeroPower Corporation to significantly increase engine life in dusty and sandy environments. The UK design is a "short can" that will allow maintenance to be performed without unfastening and moving the EAPS.

**Individual Serviceman Non-Lethal System (Belgium, Italy).** This project will evaluate two foreign non-lethal weapons developed by FN Herstal of Belgium and Baretta of Italy. Both candidates may provide a higher rate of fire, greater engagement ranges, and greater magazine depth than currently fielded weapons.

**Miniature Synthetic Aperture Radar (MiniSAR) (Netherlands).** This project will evaluate the Mini SAR, developed by European Aerospace and Defense Systems (EADS), a miniaturized Synthetic Aperture Radar (SAR) sensor system that produces radar images in near-photographic quality in day and night conditions. The Army's Program Manager for Robotic and Unmanned Sensors (PM-RUS) will integrate and test the Mini SAR to determine its suitability and operational effectiveness for use on the Army's Shadow 200 Tactical Unmanned Aerial Vehicle (TUAV).

### **Navy Projects**

**Diver Hull Inspection and Navigation System (Australia).** This project will evaluate a mature underwater survey system developed by Advanced Technology Systems to determine its suitability for use by U.S. Naval forces conducting Explosive Ordnance Disposal (EOD) diving operations, including searching and inspections of ship hulls and berthing areas. The Spot-On Ship Hull Survey System is currently being used by the Swedish Coast Guard. The Swedish open architecture system combines video streams from multiple sensors, underwater positioning data and ship's hull schematics to accurately track and record the diver's underwater movements.

**Link-16, 11B Management Integrator (United Kingdom).** This project will evaluate an Air Defense System Integrator (ADSI) developed by Ultra Electronics Advanced Programming Concepts, Inc. as an add-on component that will integrate the reception, display, and transmission of messages through Link-11 and Link-16. ADSI will provide the integration to Link-16 and the MIDS LVT-1 which will provide the interoperability required. If successful, the ADSI will have demonstrated the next generation tactical data link.

**Next Generation Underwater Breathing Apparatus (Canada, Italy, United Kingdom).** This project will evaluate state of the art diver life support equipment developed by Carleton Life Support of Canada, OMG of Italy and DIVEX of the United Kingdom to determine suitability for use by U.S. Naval Forces in Underwater Explosive Ordnance Disposal, Mine Counter Measures, Naval Special Warfare missions, battle space preparation for Amphibious Assault, Force Protection, and Harbor Security operations. The candidate systems are currently in use by numerous NATO countries, thereby enhancing interoperability with NATO and coalition partners.

**Telemetry Buoy for the Underwater Communication System (Australia).** This project will evaluate an Australian buoy developed by Nautronix MariPro that can provide effective underwater communications between different US Navy platforms. By utilizing air-dropped expendable sonobuoys, and linking with the Australian Hydro Acoustic Communications Link (HAIL) system, this telemetry buoy will be a valuable Navy netcentric warfare asset.

### **U.S. Marine Corps Projects**

**40MM Low Velocity High Explosive Dual Purpose (HEDP) Product Improvement (Canada, Germany) (joint with USSOCOM).** This project will integrate an improved propulsion system; cleaner burning propellant; a self-destruct fusing mechanism; and improved Insensitive Munitions energetic technology into an improved low velocity 40mm HEDP cartridge, for use in the M79 and M203 Grenade Launchers. SNC Technologies of Canada and Rheinmetall of Germany will participate.

**Highly Mobile Oxygen Supplementation System (Canada).** This project will evaluate a portable, lightweight battery-powered Highly Mobile Oxygen Supplementation System (HMO2SS) from University Health Network for reliability, ruggedness, and adaptability. The HMO2SS is a highly mobile oxygen-breathing mask that can provide increased oxygen therapy in mass casualty medical care 8 to 12 times longer than current masks. Currently, there are no domestic systems in production to meet the Marine Corps requirements. A successful FCT will result in the medical units needing fewer heavy, high pressure oxygen bottles when deployed without negatively impacting their current mission for mass casualty medical care.

**Laser Marksmanship Training System (Republic of Korea).** This project will evaluate the Seoul Standard “Hummerbook” notebook, ruggedized to meet requirements for a hardened laptop to serve in harsh environments as a weatherproof scoring device for the Laser Marksmanship Training System (LMTS). The Seoul Standard product has been validated by the National Guard Bureau and is scheduled to be fielded to all National Guard armories and facilities, as well as being provided to all mobilizing and deploying National Guard units. Although the LMTS was designed as an indoor training device, the National Guard uses it effectively as an outdoor marksmanship Tactical Engagement Simulation System (TADSS). A successful evaluation of the hardened unit will add value to the evolution of LMTS to a fully functioning Tactical Engagement Simulation System.

**M16A2/M4 Training Bolt (Canada).** This project will evaluate the M16A2/M4 training bolt manufactured by SNC Technologies which is designed to fire the Special Effects Small Arms Marking System (SESAMS) training cartridge. A successful FCT will allow the Marines to fire, at short range, low velocity marking ammunition for urban terrain training.

**Multi-Spectral Camouflage Netting (Canada, Israel, Sweden).** This project will evaluate new two-sided multi-spectral camouflage nets from Fibrotex, Ltd. of Israel, GMA Cover Corp. of Canada, and Saab Barracuda LLC of Sweden. A successful FCT will allow the Marine Corps to employ ground forces with “one net” that is capable of two different camouflage patterns. The result is a significant reduction in purchase quantity, cost, logistical transportation, and storage requirements while fielding the full camouflage capability in a much shorter time.

### **U.S. Special Operations Command Projects**

**40mm Tactical Marking, Day/Night Training Cartridges (Germany) (joint with Army).** This project will qualify two 40mm low velocity cartridges for multi-service use: an infrared tactical marking cartridge and a 40mm day/night training cartridge, developed by Nico Pyrotechnik of Germany, both of which use unique chemi-luminescent night marking technology. The 40mm tactical marking cartridges provide for accurate IR target marking to support precision fire control and air-ground combat in daylight and at nighttime. The 40mm day/night training cartridges allow soldiers to train as they fight, at night using their night vision goggles, a capability not currently available.

**70mm Multi-Purpose Penetration (MPP) Warhead - Norway - USSOCOM.** This project will evaluate an improved 70mm MPP warhead developed by NAMMO for use by Special Operations Aviation Regiment aircraft. This warhead will provide special operations forces with a significant new capability to defeat hardened targets such as building, bunkers, and other structures.

**84 mm Multi-Target Warhead (Sweden).** This project will evaluate an 84 mm Multi-Target Warhead developed by Saab Bofors Dynamics for use in the Multi-Role Anti-Armor, Anti-Personnel System, the primary Special Operations Forces crew-served shoulder fired weapon. This warhead is optimized for use in urban/built up area and will defeat various types of structures and targets using a tandem warhead with a follow-through charge. This weapon could greatly enhance the capability of Special Forces during operations in urban environments.

**Tethered Balloon ISR Platform (Norway, United Kingdom).** This project will evaluate a means of employing unique Intelligence, Surveillance, and Reconnaissance Sensor Communications packages, developed by Tyra Invest AS of Norway, Allsopp Helikite, Ltd., and Noesis Inc./Lindstrand Ltd. both of the United Kingdom using a tethered balloon platform concept. If proven viable, this cost effective material solution will provide Special Operations Forces a new capability that will significantly improve tactical situation awareness in the conduct of mission objective to find, fix and destroy the enemy, and simultaneously provide friendly force protection.

**Close Quarter Battle Pistol (Austria, Germany, Italy, Switzerland).** This project will evaluate pistols from multiple vendors: Steyr/Mannlicher of Austria, Glock of Austria, Heckler and Koch of Germany, Baretta of Italy, and SIG of Switzerland/Germany. These pistols have demonstrated the ability to fire multiple caliber rounds, weighing less than 40 ounces, and with improved

accuracy, reliability and ergonomics. The objective will be to replace the legacy SIG226 battle pistol used by Special Operations Forces for the past 15 years.